USER MANUAL

Quad Stage LED

DMX-controlled RGB 4-Panel Stage Bar

ENGLISH Page 2-10

RevA 01 12/2009 Order code: 12-015-0133-80100-1-01

■ Introduction

Dear customer,

congratulations on the purchase of this quality item and the trust having been put in us with this decision. To take full advantage of all possibilities and for your own safety and the safety of your environment, please read these operating instructions carefully before you start using the unit.

■ Security advice before use

Warning: Read this section carefully before installing, powering, operating, cleaning or servicing this product!

The following symbols are used to identify important safety information in this manual:

DANGER!
Safety hazard. Risk of injury or death.

WARNING!
Hazardous voltage. Risk of severe or fatal electric shock.

WARNING!
Fire hazard.

WARNING!
Read manual before installation and operation.

General advice:

1. Read this manual completely before using the product.
2. Keep this manual in your records for future reference.
3. Follow all instruction printed in this manual, otherwise warranty may be void.
4. Follow all printed security advice on the product itself. The lighting flash with arrowhead within an equilateral triangle makes you aware of non-insulated AC mains voltage inside the unit. The exclamation mark within an equilateral triangle makes you aware of important operating and maintenance instructions in the literature attached to this product.
5. Take care of enough distance between this product and sources of hum and noise like electric motors and transformers.
6. Carry this product with greatest care. Punches, big forces and heavy vibration may damage this product mechanically.
7. The manufacturer takes no responsibility for injury or damage caused by not following the safety precautions and instructions printed in this manual.

Warning! Class 1M LED product.

1. Do not look into the beam from a distance of less than 40 cm (16 inches).

■ DMX signal drop condition

The device will retain the status that it was in before the DMX signal got lost, but potential tact settings will be automatically cleared.

■ Maintenance

This unit does not need regular maintenance. The internal circuit is protected by a 250V/2A slow-blow fuse 5x20mm fuse. If this fuse fails, this usually indicates an internal fault requiring servicing by a qualified engineer. The fuse shall only be replaced by a fuse of same specification, and the replacement has to be made by qualified personnel obeying applicable safety rules.

■ Technical data LED QUAD STAGE:

LEDs ……...…4 panels with each 146pcs. 10mm LEDs (40 red – 68 green – 38 blue)
Dispersion angle…….20 degrees
Mains Input…….. AC90-250V~ 50/60Hz
Power supply type……..switch mode
Power Consumption……..max. 44W
Fuse…….250V 2A T (slow blow, 5x20mm glass)
DMX connections……3 pin XLR (Male / Female)
Modulation Type…….Advanced Bit Angle Modulation (ABAM)
Control protocol.....DMX 512 (1990)
Dimensions (without brackets)……..……LxHxD 913.00 x 273.00 x 61.00mm
Weight ……..9.1 kg

■ Standards

This product complies with the following standards:
EU safety.....EN60598-1:2008, EN60598-2-1:1989
EU EMC.....EN55015: 2006 + A1:2007, EN61547:1995 + A1:2000
EU Harmonics EN61000-3-2:2006
EU Flicker …….EN61000-3-3:2008
US safety ……..……UL60065
US EMC……..……..FCC Part 15

This product meets both the EMC Directive 2004/108/EC and the Low Voltage Directive 2006/95/EC.

2. Do not stare into the beam for extended periods at a short distance.
3. Do not view the beam directly with optical instruments such as magnifiers.

Protection from electric shock:

1. Do not connect the AC power plug to the unit before assembly has been completed.
2. Only connect this unit to a mains socket outlet with protective earth connection, ground-fault (earth-fault) protection and overload protection.
3. Where the mains plug or an appliance coupler is used as a dis-connect device, the disconnect device shall remain readily operable.
4. To pull the AC Cord out of the wall outlet or the unit's AC socket, never pull the cable itself, but only the AC plug.
5. Disconnect the unit from AC supply by pulling the AC plug out of the wall outlet or the unit's AC socket before any kind of cleaning on the product. Use smooth and dry cloth only for cleaning. Check all connection cables before reconnecting the unit.
6. Do not expose this unit to any dripping or splashing liquids, and do not place objects filled with liquids, such as vases, on the unit. Do not operate this unit near to open water or in high humidity.
7. Choose the position of the AC cord according to the lowest risk of damage by foot steps or by squeezing it. Take especially care of the AC cord outlet on the unit as well as the AC plug and wall outlet at the other end of the cable.
8. Do not open the unit for service purpose, as there are no user-serviceable parts inside. Warranty will be void in any case of unauthorized service by the user or other not authorized persons.

Protection from fire:

1. Take care of not placing the unit near sources of heat (e.g. powerful amplifiers, fog machines).
2. Allow at least about 6" (15cm) between this unit and other devices or a wall to allow for proper cooling.
3. Be sure this fixture is kept at least 0.5m away from any flammable materials (decoration etc.).
4. Do not stick filters, masks or other materials directly on the LEDs or the LED cover screen.
5. Take always care of sufficient air convection in the unit's environment to avoid overheating, especially when mounting in a closed environment. Make sure air convection slots are not blocked. Do not operate this unit in environmental temperatures exceeding 35 degrees Celsius.
6. Check the total maximum power of your AC wall outlet if you

connect several units to one wall outlet and avoid any overloading.

Protection from injury and damage:

1. Never use any accessories or modifications not authorized by the manufacturer of this unit.
2. Choose a location for operation where the unit is protected from vibration and where a fixed mounting position is provided. In case of overhead-mounting, follow appropriate rigging rules and your country's regulations for rigging safety. See appendixes if any.
3. Before plugging the AC cord in the wall outlet, check whether the AC mains voltage and frequency is the same as this product is specified for. Whenever your AC plug should not match the wall outlet, contact you dealer immediately.
4. If fluids have spilled into the unit or small parts have intruded the unit, immediately switch off the unit and hand it over to the authorized service for a security check.
5. Disconnect the unit from AC supply by pulling the AC plug out of the wall outlet or the unit's AC socket during a thunder-storm in order to avoid any damage on the unit due to AC voltage peaks.
6. In cause of not correct function of this unit or damaged AC cord or other damaged parts, pull immediately the AC plug out of the wall outlet and hand the unit over to the authorized service for a security check.
7. To meet all aspects of functionality and security during maintenance work to be preformed on this unit, all parts should be replaced by genuine spare parts. Consequently, take care of your dealer or maintenance company to be authorized by the manufacturer.

■ Health advice

This unit produces and absorbs electromagnetic radiation. The strength of radiation and the sensitivity for disturbing interference matches the CE and FCC requirements. A corresponding sign is printed on the backside of the unit. Any change or modification may affect the behavior of the unit concerning electromagnetic radiation, with the CE requirements eventually not to be met any more. The manufacturer takes no responsibility in this case.

■ Functional advice

This unit is immune to the presence of electromagnetic disturbances – both conducted and radiated - up to a certain level. Under peak conditions, the unit is classified to show a "class C" performance criteria and may encounter temporary degradation or loss of function which may need manual help to recover. In such case, disconnect the AC power from the unit and reconnect it again to recover.

"dr" Mode (DMX Reverse Mode)

The "dr" (DMX reverse) mode allows the panel assignment to the 16 received DMX-channels to be reversed – useful if two QUAD STAGE LED are positioned left and right on a stage. Running one unit in "d" mode and the other in "dr" mode (with same start address) will yield a symmetric geometrical behaviour.

To activate the "dr" mode, press the MODE button (1) until the display shows "dr", indicating operation in "dr" (DMX Reverse) mode. Shortly after that, the display shows the DMX starting address. You can choose any DMX starting address by simply using the UP/DOWN buttons (2/3). The chosen DMX-address comes effective approximately 3 seconds later and will show up on the display (4) in alternation to the "d". This allows control of the unit by any external DMX signal sending on the chosen channels.

In "d" mode, the unit receives DMX values on a packet of sixteen channels and mirrors the received data on the DMX output (6). Inside these 16 channels, each of the four RGB panels occupies the following channel assignment:

Fourth Panel:

DMX channel	Value Range	Function
CH1	000-255	Out1 level
CH2	000-255	Out2 level
CH3	000-255	Out3 level
CH4	000-127	Master level
	128-227	Tact (128=slow / 227=max. speed 23 Hz)
	228-255	Master level full on, Tact off

Third Panel: CH5…CH8 – as above
Second Panel: CH9…CH12 – as above
First Panel: CH13…CH16 – as above

In case several QUAD STAGE LED are supposed to be controlled independently on the same DMX bus, addressing has to be done as follows:

001 first device (CH 1-16) *factory default*
017 second device (CH 17-32)
033 third device (CH 33-48)
049 fourth device (CH 49-64) and so on.

This setting is stored even if the device is switched off.

■ DMX Termination

To avoid interference the last unit of a DMX-chain should be terminated. Use a standard 120 Ohms XLR termination plug for DMX lines on the last device in a DMX bus chain.

■ Operation

As a basic concept, the QUAD STAGE LED is a DMX-only controlled unit – it does not offer any internal presets, patterns or programs. Operation thus becomes more a matter of the connected controller, the unit itself only offers two modes:

"d" Mode (DMX Mode)

Press the MODE button (1) until the display shows "d", indicating operation in "d" (DMX) mode. Shortly after that, the display shows the DMX starting address. You can choose any DMX starting address by simply using the UP/DOWN buttons (2/3). The chosen DMX-address comes effective approximately 3 seconds later and will show up on the display (4) in alternation to the "d". This allows control of the unit by any external DMX signal sending on the chosen channels.

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First Panel:

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CH1	000-255	Out1 level
CH2	000-255	Out2 level
CH3	000-255	Out3 level
CH4	000-127	Master level
	128-227	Tact (128=slow / 227=max. speed 23 Hz)
	228-255	Master level full on, Tact off

Second Panel: CH5…CH8 – as above
Third Panel: CH9…CH12 – as above
Fourth Panel: CH13…CH16 – as above

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■ Environmental advice

This unit is build to conform to the ROHS standards and the WEEE directive 2002/96/EC of the European Parliament and of the Council of the European Union. Under these regulations, the product shall not be discarded into regular garbage at the end of its life, but shall be returned to authorized recycling stations.

■ Unpacking

Please check that the box contains the following items:

Main parts: 1 pcs. Quad Stage LED main unit
1 pcs. mains cable
1 pcs. operation manual

If any part is missing, please contact your dealer immediately for replacement.

■ Getting started: choosing a location

Risk of fire: The QUAD STAGE LED has been designed to work in dry indoor environments at environmental temperatures up to 35 degrees Celsius. For proper operation, the unit must be operated with unobstructed air convection to its outside metal case.

Do not:

- Operate the QUAD STAGE LED in environments with more than 35 degrees environmental temperature or more than 75% relative humidity.
- Operate the QUAD STAGE LED in any closed environment smaller than 10cbm, unless forced air convection is provided.

■ Getting started: secure mounting

The QUAD STAGE LED is designed to be mounted on a tripod with 35mm tube diameter. Make sure that the diameter of the inserted tripod tube is not less than 35mm as otherwise secure mounting can not be granted. Slide the tripod adaptor over the tripod tube and secure the unit with the provided screw handle.

Make sure that:

- the tripod is erected to a height where the audience can neither accidently nor intentionally touch it

- The working height is in enough distance to ceiling or other constructions on top to avoid any heat accumulation
- The working load of the used tripod is sufficient to carry this unit. Do only use safety-certified tripods.
- The tripod has a locking mechanism against unintentional tube retraction.
- The tripod stands on even and firm ground.
- Any cable running to and from the trip is not obstructing pathways of the audience. Make sure pull force on a cable can not make the tripod fall over.
- The tripod base is either out of audience reach or gated with a security fence
- The tripod is placed outside of any evacuation paths.

Risk of injury: Tripod mounting requires related knowledge and experience, including among others calculating and balancing working load limits, correct positioning and securing, and periodic safety inspection of all installation material and the tripod. If you lack such qualifications, do not attempt a tripod installation yourself. Improper installation can result in body injury. Be sure to complete all rigging and installation procedures before applying power to the unit.

Note: The manufacturer of this unit does not assume any liability for correct and secure placement and use of tripods – make sure to comply with local safety regulations.

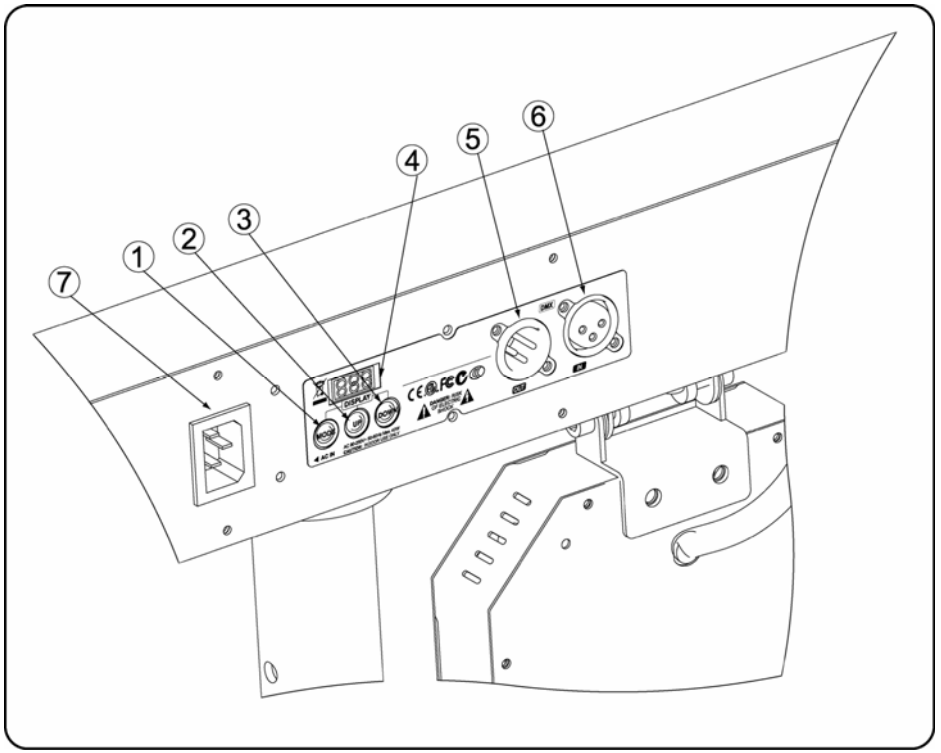
■ Getting started: making AC supply connections

Set up connections as follows:

1) Make DMX connections to the require control equipment
2) Connect the supplied mains cable to the AC inlet (7) of the unit and to an AC wall outlet on the other side.

Risk of fire / Safety risk
The AC socket providing power to the QUAD STAGE LED must be properly and separately earthed. Do not use any other AC cords than the provided one or any other AC cord authorized by the manufacturer.

■ User Interface



User interface overview:

1 MODE selection button
2 UP-Button
3 DOWN-Button
4 Display showing the Mode, DMX-address, etc.
5 DMX input
6 DMX output
7 AC input